

Statement of Interest
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The severity of environmental problems associated with PCBs is underscored by the fact that although these chemicals have been banned for 30 years, Great Lakes fish continue to be under consumption advisories for the protection of human health. Similarly, problems associated with the analysis of PCBs have been reported since the 1970s and in response, environmental scientists currently measure congeners instead of aroclors. We now are part of a federal committee with a mission to resolve the issue of how to detect and quantify these materials. My interests are two fold:

- We use the best available analytical and statistical methods to address the issue of detection and quantitation limits in order to make sure that unacceptable quantities of PCBs are not discharged into the environment.
- We develop robust procedures that provide reliable data so we can focus attention on eliminating PCBs from surface water discharges, instead of chasing false positive data and through the legal system.

I am concerned that the bureaucracy associated with regulatory methods approval is often a factor that prohibits innovation and maintains the status quo. Analytical issues associated with detection limits, matrix interference, and pattern recognition do not matter when PCBs are being discharged into the environment. It is important that we look carefully at how new technology can help answer and resolve issues and then implement new procedures where appropriate. I also am concerned that we do not spend an inordinate amount of time on theory without appropriate "reality checks" with respect to how laboratories can implement methods on a routine basis.

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To: FACA on Detection and Quantitation

Fr: Barry Sulkin, Environmental Group Representative

Re: Statement of Interests for 1st meeting, June 21, 2005 - Washington, DC

My clientele is made up primarily of non-profit environmental and advocacy groups, as well as individuals involved in water quality permits, policy and litigation - usually involving efforts to allow less pollution or prove impacts. To a lesser extent, I also serve business and industrial clients with pollution or compliance problems, as well as some government clients. I also have previous laboratory work experience, and worked for many years as a state water pollution agency regulator.

Though I have limited knowledge of the details of the detection and quantitation laboratory issues, my work does involve a considerable amount of water sampling and interpretation of results, as well as related expert witness testimony. As a representative of environmental interest groups on this FACA I am coming to this from the position of trying to make certain that as we try to resolve the issues, we don't weaken any protections or allow additional pollution of waters, perhaps inadvertently, through methodology or policy changes.

As I am somewhat unclear at the outset as to the specifics of the debates and discussion that have led to this FACA, it is a bit difficult to state definitively what I seek as an outcome. However, a couple of general issues can be stated in terms of my expectations for the interests I represent - I would like this process to result in:

1. A clear articulation of the problems being addressed in terms that can be understood by the environmental interests I represent - as well as by me.
2. Analysis method(s) that accurately reflect the level of pollutants in waters at adequately low levels and are consistent across the country.
3. If methods are changed to better address low levels, they should not compromise the identification of pollution problems or already identified polluted waters by other or current methods that are adequate for the situations in question. For example, highly polluted waters on 303(d) lists should not be de-listed simply because they were not identified by some new, more sensitive method if previous methods were adequate for those situations.

Statement of Interest – Federal Advisory Committee on Detection and Quantitation
Michael Murray, Ph.D.
National Wildlife Federation

I joined the Great Lakes office of the National Wildlife Federation (NWF) as Staff Scientist in 1997. My work has focused on the scientific and policy aspects of toxic chemicals in the Great Lakes region, including scientific and policy research related to mercury sources, fate and transport, ecological and human health effects, and control options; other toxic chemicals of concern; water quality criteria and total maximum daily load plans; and development and communication of fish consumption advisories. I received M.S. and Ph.D. degrees in Water Chemistry from the University of Wisconsin-Madison, where my research addressed several aspects of the environmental chemistry of polychlorinated biphenyls (PCBs) (some material of which I have published, other components of which I plan to publish). In addition to my current duties with NWF, I am an adjunct lecturer in Environmental Health Sciences at the University of Michigan's School of Public Health, where I have taught courses in environmental chemistry and water quality management.

My interest in detection and quantitation levels dates from my graduate school work on PCBs, where I experienced some of the challenges of analyzing for semivolatile organic compounds at relatively low environmental levels. As with other researchers, through a combination of good sampling and analytical procedures, I was able to successfully analyze PCBs in air and water in both laboratory and environmental samples at low levels. This work was done using capillary column gas chromatography in the latter 1980s and first half of the 1990s. In the meantime, I have learned increasingly about the human health and ecological threats from what are otherwise considered to be low levels of PCBs and other toxic chemicals, and also of what I consider to be outdated federal guidelines for analyzing PCBs and other chemicals. I have also become aware of how these issues have played out at the state level through the Michigan Quantification Level Advisory Group.

Concerning my interests and those of NWF with respect to detection and quantitation issues pertaining to Clean Water Act programs, key issues include:

- Detection and quantitation levels should be developed in a scientifically sound manner
- Guidelines for common analyses must balance scientific rigor, high sensitivity, and practicability
- Choice of analytical methods has a significant impact on detection and quantitation potential, and EPA approved analytical methods should reflect recent, proven developments in technology
- Both sampling and analytical factors must be considered in establishing detection and quantitation limits
- Given the evolution in technologies, there is no reason to assume that analytical sensitivities would not continuously improve with time over the long run
- Given our limited understanding of the full range of health and ecological threats from toxic chemicals, it is essential that sensitive procedures be available for a wide range of chemicals; such information is needed to assess progress towards virtual elimination goals for toxic chemicals